

TITLE OF THE INVENTION

Memory Cartridge System

BACKGROUND OF THE INVENTION

5 Field of the invention

The present invention relates to a memory cartridge system. More specifically, the present invention relates to a memory cartridge system applied to a home game apparatus or a home karaoke device to process a program stored in the memory cartridge when the memory cartridge is attached or inserted.

10 Description of the prior art

In a conventional home game apparatus, all the programs and data are stored in a memory cartridge ROM and no program and data are stored in a main body ROM. That is, a common program and common data commonly executed and proceed for all the kinds of memory cartridges are stored in not the main body ROM but the cartridge ROM.

15 However, if the common program and the common data are stored in the cartridge ROM, there was a problem that it is necessary to increase a capacity of the ROM in proportion to them, and thus price of the cartridge becomes high.

On the other hand, as a recent home karaoke device, there are devices that store a common program and common data in a main body ROM and music data in a cartridge ROM. In such devices it is possible to minimize a memory capacity of the cartridge ROM.

However, even if such a home karaoke device is, it is impossible to start different programs depending on whether the cartridge is attached or not.

25 In addition, a conventional memory cartridge could not be used for various kinds of devices. For example, it is impossible to use a memory cartridge of a home karaoke

device as a memory cartridge of a home game apparatus, or a memory cartridge of a home game apparatus as a memory cartridge of a home karaoke device.

SUMMARY OF THE INVENTION

5 Therefore, it is a primary object of the present invention to provide a memory cartridge system capable of restraining a capacity of a cartridge memory and start different programs depending on whether a cartridge is attached or not.

It is another object of the present invention to provide a memory cartridge capable of being applied to such a memory cartridge system.

10 It is another object of the present invention to provide a memory cartridge capable of being available in various kinds of devices.

A memory cartridge system according to the present invention is a system that a memory cartridge stored with a second start program is detachably attached to a main body incorporating a main body memory stored with a first start program, and comprises:
15 first mapping means for mapping the first start program to an address space in a first manner when the memory cartridge is not attached; and second mapping means for mapping the first start program and the second start program to an address space in a second manner when the memory cartridge is attached.

In one aspect, the present invention is a home game apparatus that a memory
20 cartridge stored with a second start program is detachably attached to a main body incorporating a main body memory stored with a first start program, and comprises: first mapping means for mapping the first start program to an address space in a first manner when the memory cartridge is not attached; and second mapping means for mapping the first start program and the second start program to an address space in a second manner
25 when the memory cartridge is attached.

In another aspect, the present invention is a home karaoke device that a memory cartridge stored with a second start program is detachably attached to a main body incorporating a main body memory stored with a first start program, and comprises: first mapping means for mapping the first start program to an address space in a first manner when the memory cartridge is not attached; and second mapping means for mapping the first start program and the second start program to an address space in a second manner when the memory cartridge is attached.

The main body memory incorporated in the main body is stored with the first start program, and the memory cartridge attached to or detached from the main body is stored with the second start program. The first start program is mapped to the address space in the first manner when the memory cartridge is not attached, and the first start program and the second start program are mapped to the address space in the second manner when the memory cartridge is attached.

In a preferred example, at a time of start, first enable signal applying means applies a first enable signal to the main body memory or the memory cartridge. That is, when the memory cartridge is not inserted or attached, the first enable signal is applied to the main body memory, and when the memory cartridge is inserted or attached, the first enable signal is applied to the memory cartridge.

More preferably, when the memory cartridge is attached, second enable signal applying means applies a second enable signal to the main body memory. Accordingly, when the memory cartridge is attached, the first enable signal is applied to the memory cartridge and the second enable signal is applied to the main body memory.

In another preferred example, the first enable signal is outputted from a first enable output terminal provided on the main body, and the second enable signal is outputted from a second enable output terminal. When the memory cartridge is not